

SHORT COMMUNICATION

A Half-century Experience of Running Journal Clubs and applying Interactive Teaching-learning Methods at Orthopedic Department of Tehran University of Medical Sciences

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Abstract

Journal club is crucial in medical professions education, especially residency training. Critical evaluation allows learners to read, understand, and apply the evidence to bridge the gap between research and practice. Academic members of the Tehran University of Medical Sciences (TUMS) Orthopedic Department have held about 2,300 weekly sessions for around 50 years, even in times of crises, to review the latest publications in orthopedics and sometimes linked their journal clubs to hospitalized cases. Considering the educational and research-related nature of journal clubs, educational planning is necessary for running effective sessions for academicians, residents, and the Continuing Medical Education (CME) program participants.

Level of evidence: V

Keywords: Continuing medical education, Evidence-based, Journal club

Introduction

Journal clubs have been considered a vital tool for medical professions education, especially residency training,¹ for more than a century where people can meet each other and review the updates in their special field.² Journal clubs aimed to facilitate the cost-effective sharing of the latest publications among health professionals. As a medical practitioner, an individual should be able to distinguish between what is already known about a subject and what a new study adds. In addition, learning the art of critical evaluation allows learners to read, understand, and apply the published articles that help to bridge the gap between research and practice.³

Main body**Trend of Journal Clubs in Tehran University of Medical Sciences (TUMS) Orthopedics Department**

For around 50 years, academic members of the TUMS

Orthopedic Department have held weekly journal clubs to review the latest body of evidence in the field of orthopedics, sometimes linked to real hospitalized patients.

In the past, these conferences claimed to be the oldest journal clubs in TUMS in the form of educational sessions. Academic members and residents of orthopedics from different educational hospitals have been invited and benefited from these sessions by discussing papers and cases simultaneously. Professor Alami Harandi, one of the pioneers of orthopedic surgery in Iran, founded these weekly meetings, which have been held every Thursday in Shariati Hospital. They could possibly be called early sessions of evidence-based medicine in the framework of case-based discussions fortified by the latest body of evidence.^{2,4}

Nowadays, the weekly orthopedic sessions are still held. Surprisingly, they are still ongoing and held without interruption. During crises such as the COVID-19, both

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academicians and interested residents and other learners gathered together in weekly meetings on virtual platforms^{5,6} for the first two to three months, and after that, participants attended the in-person sessions with social distancing, discussed and learned together in different fields of orthopedics, such as general orthopedics, knee, hip, shoulder, and other subspecialties, and reviewed new materials related to their patients.⁷

Upcoming Challenges

The pros and cons of journal clubs are highly related to their dual nature. Among the advantages, one can learn evaluation skills and stay informed about the latest scientific developments,⁸ it could be a turning point for starting research and critical studies, and it could also prepare learners for their promotion exams. Using authentic patient records in case-based learning allows learners to experience real-world clinical complexities by exposing them to ambiguous or contradictory clinical data and unexpected factors.^{9,10} The other advantage is the cost-effectiveness of the educational process; in some fields, such as orthopedics, difficult work schedules cause a lack of free time to read new research. On the other side, the up-to-date literature is so crucial considering the rapid evolution of surgical technologies and techniques in the field of orthopedics more than ever.¹¹

Continuing medical education following postgraduate studies and creating a friendly environment outside serious work disciplines are the other benefits.¹⁰ Sharing clinical experience through discussing clinical cases could be a major benefit of transferring clinical problem-solving skills in case-based discussions.¹²

A threat to holding high-quality journal clubs is the lack of interest and desire of the participants to attend these meetings. As to the body of evidence, the moderate to favorable level of satisfaction is good and acceptable for journal club meetings. Planning such meetings where people are at different levels and disciplines may become a challenge.

For running journal clubs, the presence of residents and attendees as well as methodologists and statisticians in some sessions to review articles from recent literature is necessary.¹³ However, the low attendance rate in these meetings and the loss of learning opportunities are becoming a challenge. Although the increased use of online platforms and dedicated forums has provided a possible solution to this problem,¹⁴⁻¹⁶ some studies showed less participation in web-based programs than in face-to-face sessions.^{5,15}

Despite the lack of access to information services in the beginning years, different professors from different cities and hospitals participated in these meetings. Over these 50 years, more than 2,300 sessions have been held in which 20-50 participants attended in person, and around 30-50 people all around the world connected electronically.¹⁷

Even in some cases, different professors would plan for patient management based on their specialty, and the process of patient admission and continuing the treatment and follow-up would proceed following these meetings. These meetings were instructive not only for academicians and residents but could also play the CME role for orthopedists who attended in.¹⁰

Recommendations

Despite the passing of several years since the first journal club in the field of orthopedics and its allied subspecialties and fellowships, evaluating the quality of these meetings and the level of satisfaction of the faculty members and the participants seems necessary.

The decreasing rate of attendance in the sessions seems to be a threat, possibly due to the introduction of digital natives and Generation Z.^{6,18} Thus, strategies to boost attendance are needed.^{19,20} Considering the dual nature of journal clubs, it is also essential to balance the educational schedule to meet learning objectives while simultaneously developing appraisal skills to apply in real-world settings.^{21,22} The incentive strategies for participants, academicians, and residents should be considered as well. Additionally, technology can fortify and guarantee the continuity of these meetings.^{16,23}

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